No. 796,889. PATENTED AUG. 8. 1905.

B. BALLENGER.

TIRE SETTER.

APPLICATION FILED APR. 27, 1905.

2 SHEETS—SHEET 1.

FIG. 1

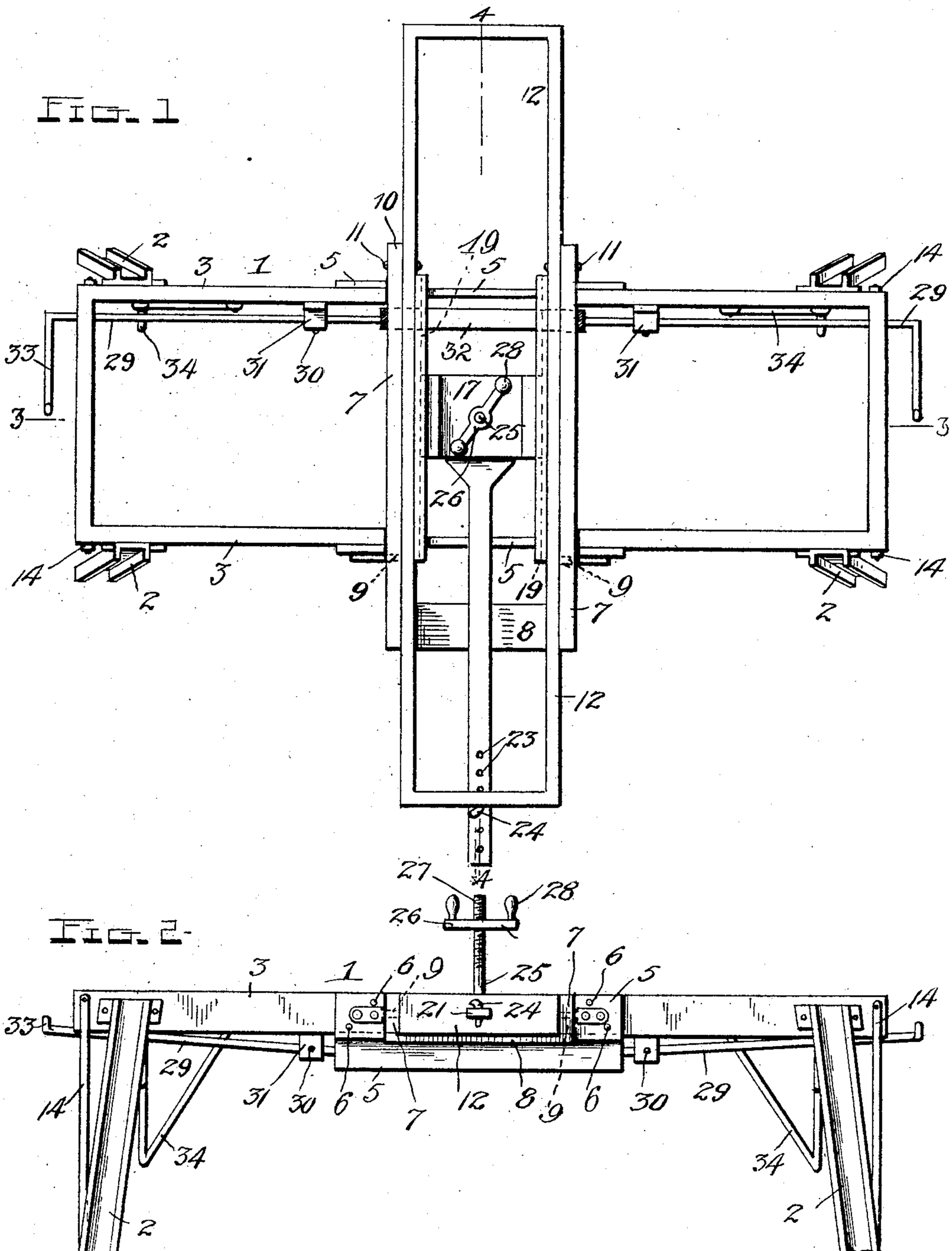

FIG. 2

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2 SHEETS—SHEET 2.

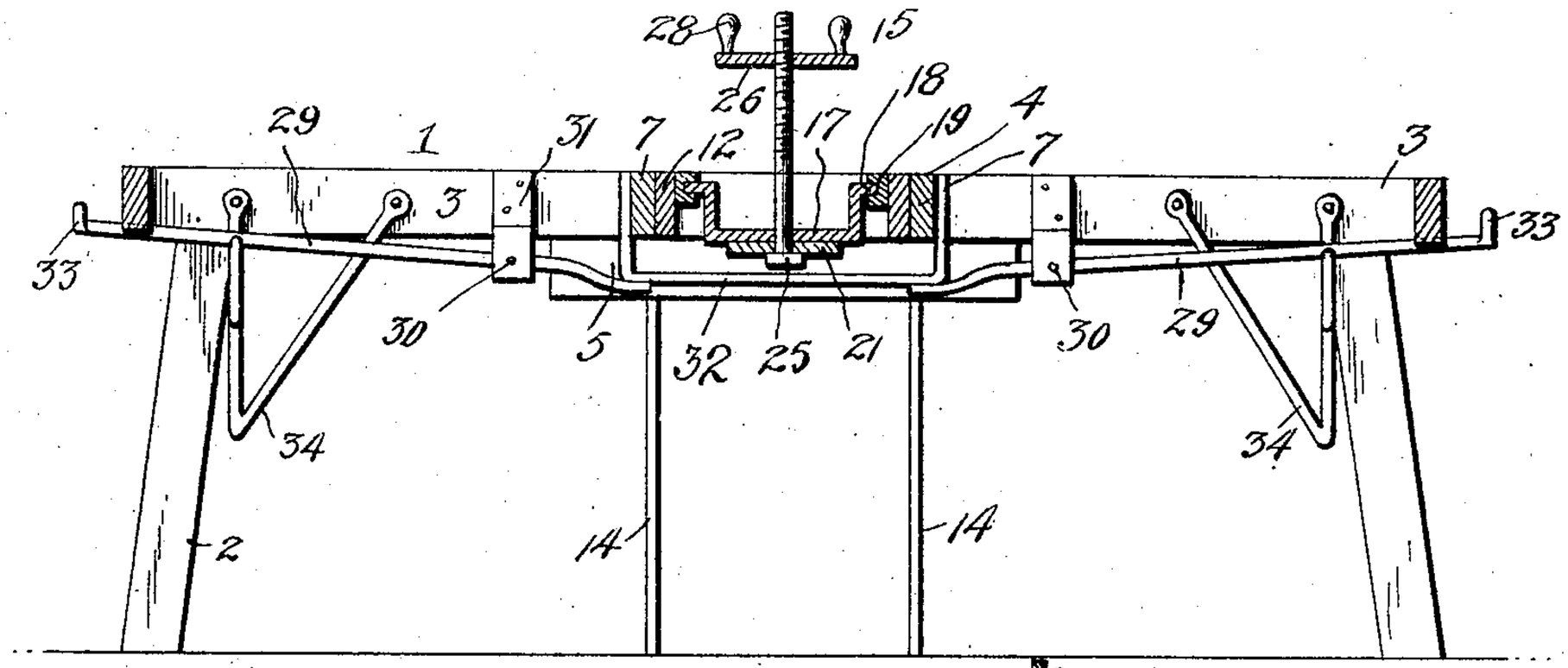


FIG. 3

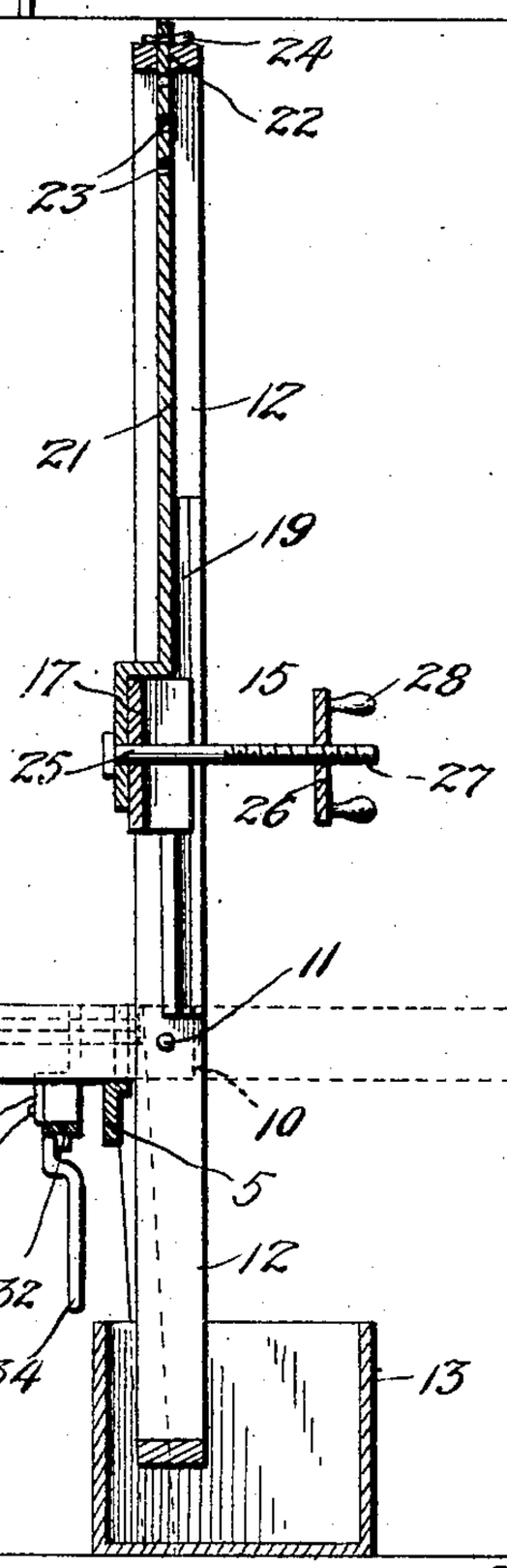
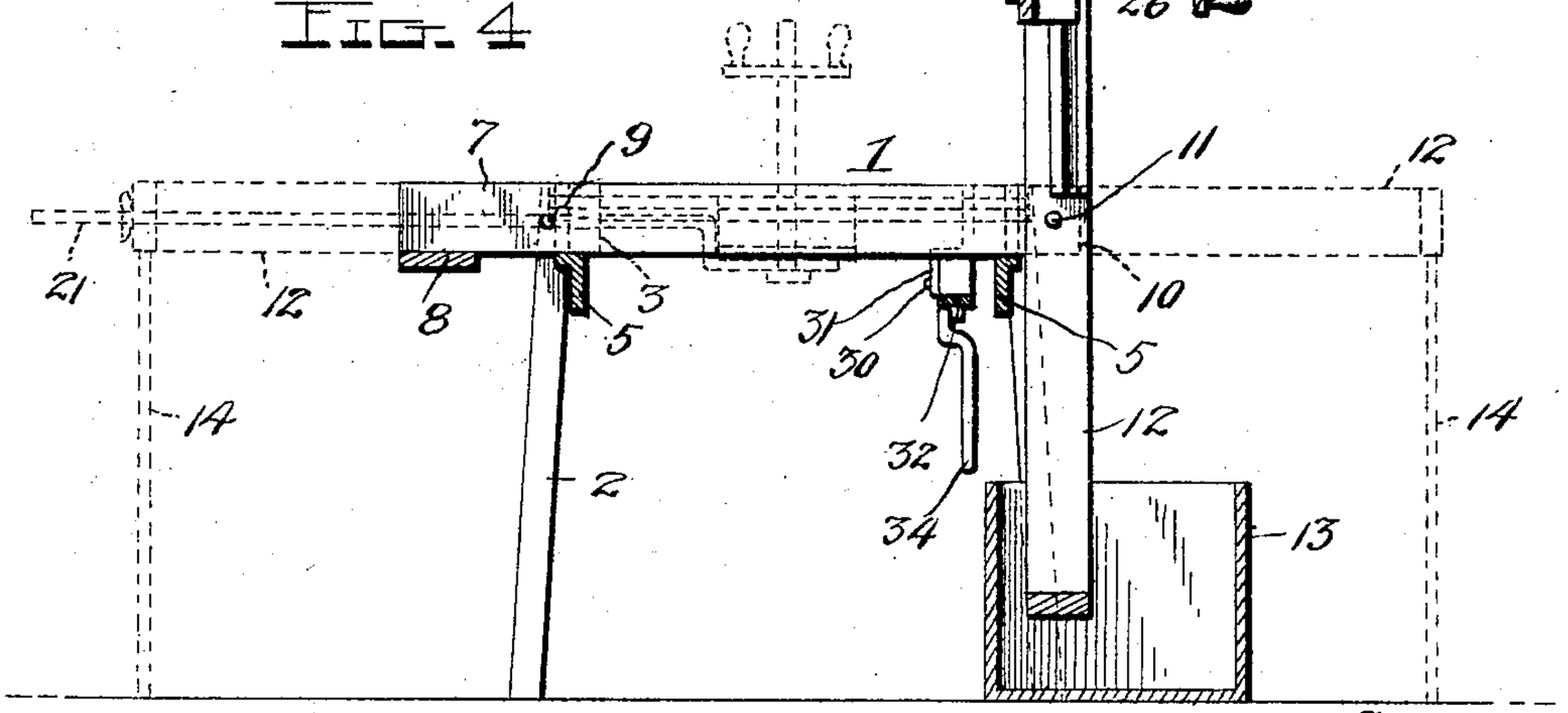


FIG. 4



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UNITED STATES PATENT OFFICE.

BENJAMIN BALLENGER, OF LAMAR, MISSOURI.

TIRE-SETTER.

No. 796,889. Specification of Letters Patent. Patented Aug. 8, 1905.

Application filed April 27, 1905. Serial No. 257,653.

To all whom it may concern:

Be it known that I, BENJAMIN BALLENGER, a citizen of the United States, residing at Lamar, in the county of Barton and State of Missouri, have invented certain new and useful Improvements in Tire-Setters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in devices for holding and manipulating a wagon-wheel while setting its tire; and it consists in certain novel features of construction, combination, and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a simple, durable, and efficient device of this character by means of which a wagon-wheel may be conveniently handled when a tire is being shrunk thereon.

The above and other objects, which will appear as the nature of my invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a tire-setting device constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical longitudinal sectional view taken on a line 3 3 in Fig. 1, and Fig. 4 is a vertical transverse sectional view taken on the line 4 4 in Fig. 1 and showing the wheel-supporting frame in its tilted position in full lines and in its horizontal position in dotted lines.

Referring to the drawings by numeral, 1 denotes a horizontally-disposed frame which is preferably rectangular in form and supported upon suitable legs 2. Each of the side bars 3 of the frame 1 is cut in two at its center to receive a tilting transverse frame 4, and its parts are connected and secured together by angle metal plates 5, which are secured by means of screws or the like 6 and upon the outer and under faces of said sides 3. The frame 4 comprises two side bars 7, which are connected together by a cross-bar 8 at one end and which are pivoted, as shown at 9, adjacent to said ends between one of the divided sides 3. This frame 4 rests normally in a horizontal position upon the lower portions of the connecting-plates 5, so that its upper surface lies flush with the frame 1.

Between the free ends 10 of the side bars 7 of the frame 4 is pivoted, as shown at 11, a rectangular wheel-supporting frame 12. The pivots 11 are disposed nearer to one end of said frame 12 than to its opposite end, so that said frame is adapted to be swung or tilted to its full-line position (shown in Fig. 4 of the drawings) when it is desired to immerse a wagon-wheel which is secured upon said frame in a water-tank 13, provided upon one side of the main frame. When the frame 12 is in its normal or horizontal position, it may be supported upon the cross-bar 8 and the plates 5; but, if desired, supporting legs 14 may be provided upon each end of the frame 12 and so connected as to fold when said frame is tilted.

The wagon-wheel which is to be operated upon is secured upon the frame 12 by an adjustable clamping device 15, which consists of a substantially U-shaped plate 17, formed at its ends with flanges 18, which are adapted to slide in guide-grooves 19, formed by channel-iron bars, which are secured upon the inner faces of the sides of said frame 12. Secured to the under side of the central portion of the plate 17 is an operating rod or bar 21, which has one of its ends projecting through a slot 22, formed in one end of the frame 12 and provided with a longitudinal series of openings 23, through any one of which a pin or key 24 may be inserted for the purpose of adjustably securing said bar 21 in the frame. It will be seen that when said bar 21 is reciprocated the plate 17 will be slid longitudinally within the frame 12. Upon the center of the plate 12 is secured a spindle 25, upon which the hub of the wheel is adapted to be clamped by means of a nut 26, screwed upon the upper threaded end 27 of said spindle and provided with crank-handles 28.

In order to raise and lower the wheel upon the frame 12 and adjust it in the water-tank 13 when said frame is tilted to its vertical position, (shown in Fig. 4,) I provide means for tilting the free end of the frame 4. This means, as shown, consists of two levers 29, which are pivoted intermediate their ends, as at 30, in brackets 31, secured upon the inner faces of one of the side bars 3 of the frame 1. The inner end of each of the levers 29 is adapted to engage a cross-bar 32, which connects the side bars 7 of the frame 4. The outer end of each of said levers is formed with an operating-handle 33. The outer ends of said levers coact with locking-brackets 34, which are secured upon one of the sides 3 of the frame 1 and which are adapted to lock said levers to

secure the frame 4 in either its normal horizontal position or in its raised or tilted position.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device of the character described comprising a main frame, a transverse tilting frame pivoted at one of its ends upon said main frame, means for tilting said tilting frame, a wheel-supporting frame pivotally mounted at the free end of the tilting frame and a slidably and adjustably mounted wheel-clamp upon said supporting-frame.

2. A device of the character described comprising a horizontal frame, a transverse tilting frame pivoted at one of its ends upon said horizontal frame, a wheel-supporting frame pivoted upon the free end of said tilting frame, and means for tilting said tilting frame.

3. A device of the character described comprising a horizontal frame, a transverse tilting frame pivoted at one of its ends upon said horizontal frame, a wheel-supporting frame pivoted upon the free end of said tilting frame, and a lever for tilting said tilting frame.

4. A device of the character described comprising a horizontal frame, a transverse tilting frame pivoted at one of its ends upon said horizontal frame, a wheel-supporting frame pivoted at the free end of said tilting frame, an adjustable wheel-clamp upon said supporting-frame, a lever pivotally mounted upon said horizontal frame for tilting said tilting frame, and a locking-bracket for said lever, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BENJAMIN BALLENGER.

Witnesses:

L. B. PERRY,

JAMES STEELMAN.